



# Sweet, Edwards & Associates, Inc.

Ground Water, Waste Disposal, Engineering Geology & Drilling Services

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February 22, 1985

Mr. Phil Williams  
Kaiser Aluminum and Chemical Corp.  
Trentwood Works  
P.O. Box 15108  
Spokane, WA 99125

RE: GROUND WATER SAMPLING

Dear Phil:

During the period February 6-8, 1985, Sweet, Edwards & Associates, Inc. (Sweet-Edwards) personnel sampled six monitoring wells at the Kaiser Trentwood Works. Kathy Maynard of Kaiser assisted with the field work. Field procedures are designed to obtain ground water samples representative of existing water quality.

## SAMPLING EQUIPMENT

Sampling equipment consisted of:

- o Geotech peristaltic pump
- o Geotech 142 mm field filter apparatus
- o Schleicker and Schuell 0.45 micron nitrocellulose filters
- o TIMCO Teflon bailer
- o 200 ml vacuum flask
- o Altex pH meter
- o Hydrolab digital 4040 conductivity/temperature meter.
- o Gould submersible pump equipped with neoprene hose (pore volume removal only)
- o Geotech (middleburg type) pump with Teflon bladder (pore volume removal only).

USEPA SF



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## SAMPLING PROCEDURES

### Monitoring Wells

All sampling equipment was cleaned with a soap and water wash, rinsed with distilled water, followed by a methanol rinse, another distilled water rinse and a final sample rinse. Table 1 shows the depth-to-water measured in each well, the volume of water per pore volume, the total gallons removed, method of removal, and number of pore volumes removed prior to sampling. This information is included on the attached Sweet-Edwards' Field Data-Chain-Of-Custody forms.

TABLE 1

<u>WELL</u>	<u>DEPTH TO WATER (FEET)</u>	<u>PORE VOLUME (GALLONS)</u>	<u>VOLUME REMOVED (GALLONS)</u>	<u>METHOD OF REMOVAL</u>	<u>NUMBER OF PORE VOLUMES</u>
MW-1	55.64	90	270	submersible	3
MW-2	44.00	69	350	submersible	5+
MW-3	72.21	72	360	submersible	5+
MW-4	81.83	57	285	submersible	5
MW-5	77.48	63	315	submersible	5
MW-6	78.59	5.6	16.8	middleburg	3

Following pore volume removal, the water samples were collected with the Teflon bailer and transferred to the 2000 ml vacuum flask. Sample water was filtered through the 0.45 micron filter directly into sample bottles provided by Laucks Testing Laboratories via the Geotech filtering apparatus. Samples to be tested for volatile organics, TOC, and TOX were not field filtered. A QA/QC transfer blank was filled at well MW-5. Table 2 summarizes the water quality data measured in the field at the time of sampling. This information also appears on the attached Field Data Sheets.

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TABLE 2

<u>WELL</u>	<u>SPECIFIC CONDUCTIVITY</u> <u>(umhos/cm)</u>	<u>TEMPERATURE (°C)</u>
MW-1	215	---*
MW-2	350	8.2
MW-3	353	8.8
MW-4	330	9.5
MW-5	363	8.5
MW-6	315	9.8

\* Temperature unreliable because of cold temperatures.

Sweet-Edwards experienced problems, possibly related to cold weather with the pH electrode, and these measurements were discontinued in the field. Some measurements were recorded on the field data sheets, but are considered unreliable.

All samples were stored on ice prior to shipment to the lab. Samples were shipped to the lab on February 8, 1985 via Greyhound Bus Lines. Chain-Of-Custody forms were included with the samples during shipment.

If you have questions or we can be of further assistance, please call.

Respectfully submitted,

SWEET, EDWARDS & ASSOCIATES, INC.

  
JAMES J. MAUL  
Hydrogeologist

JJM/bg

Enclosures: Field Data/Chain-Of-Custody Forms